

Water Financing Partnership Facility
RETA 6498: Knowledge and Innovation Support for ADB's Water Financing Program

PILOT AND DEMONSTRATION ACTIVITY (PDA)

Project:

Demonstrating the Value of Greater Women Involvement in Implementing Arsenic Mitigation Water Supply in Bangladesh.

INCEPTION REPORT

Project Period: May 17,2009 to May 17,2010

Submitted by:



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List of Abbreviation

GOB	Government of Bangladesh
PRSP	Poverty Reduction Strategic Papers
MDGs	Millennium Development Goals
SIWRPMP	The Southwest Area Integrated Water Resources Planning and Management Project
O & M	Operation and Maintenance
DPHE	Department of Public Health Engineering
NGOs	Non Government Organizations
TOR	Terms of Reference
WE	Women for Environment
WSP	Water Safety Plans

I. Background

1. Bangladesh has been experiencing the worst risks for exposure to drinking arsenic contaminated water in the world. During early 2000's appreciable initiatives were undertaken to address the problems in various perspectives by GOB and its development partners. Arsenic mitigation has been institutionalized based on supplements to national Policies, PRSP, MDGs and other related national and international exercises. Unfortunately the interests have slowed down and most of the populations do not have access to reliable year-round safe drinking water technology.

2. A national report showed that about 46% of the installed alternative options were not functioning; though more than 70% had assigned trained caretakers for its operation and maintenance (1). The GOB has been promoting two types of arsenic mitigation technologies: (i) Alternative technologies including deep tube-wells, safe shallow tube-wells, improved dug-wells, pond sand filter, piped water systems, infiltration galleries and rain water harvesters. Those technologies include sources of water, which are safe of arsenic. (ii) Arsenic removal technologies after verified and certified by GOB. As the arsenic removal technologies are still to be developed and/or not yet widely accepted by the people, the alternative technologies have been widely promoted. But the quality of water as supplied by the alternative technologies, except safe deep and shallow tube-wells, is questionable (2,3). A national consultation proceeding reported that though women are often the caretakers of the technologies, they have limited access to operation and maintenance capacity building trainings (3). There is limited information on how the role and behaviour of women in water management have been affected in arsenic affected areas. The report also discussed the urgent needs for development of appropriate technologies. However, huge programs on sanitation by various stakeholders (including mostly promotion about safe latrine and selected safe drinking water as well as hygiene) are ongoing. It is important to note that the mid-term MDG report states that Bangladesh is off-track and cannot meet the drinking water target.

3. This is an inception report of Pilot Demonstration Activity: "Demonstrating the Value of Greater Women Involvement in Implementing Arsenic Mitigation Water Supply in Bangladesh." The project was conceptualized considering the above-noted issues and documented people's demand for safe drinking water in the SIWRPMP areas. The SIWRPMP has a core objective of enhancing the productivity and sustainability of existing FCD/I schemes thereby enhancing the incomes and livelihood of the population. Addressing arsenic contamination is of high priority from livelihood perspectives in the contaminated villages. This pilot project is about developing knowledge on the technical soundness, social acceptability, economic feasibility, and sustainability aspects related to the existing arsenic mitigation water supply scopes. The demonstration project will also provide important demonstration effects that will contribute to replication and up-scaling elsewhere upon its successful implementation.

II. Goals & Objectives of the Project

4. The goal of the project is to enhance livelihood of local population in the specified subproject areas of the Southwest Area Integrated Water Resources Planning and Management Project (SIWRPMP) through improving health and reducing water borne and arsenic diseases.

The objectives are to:

- i. assess the roles that women play in managing water for various domestic uses such as drinking, cooking, bathing, washing, etc. and how they have been involved in making decisions about how water supply interventions should be designed and implemented in the arsenic affected villages
- ii. illustrate the advantages of getting women involved in decision making and implementation processes of arsenic mitigation water supply project based on an empowered local women network mechanism (Women Group; WG)
- iii. illustrate the mechanisms of training and promoting Water Safety Plan (revised for local context after WHO guideline) by women groups among women users for drinking safe water under Women Group

5. The specific objectives are: (i) to create access to community chosen safe drinking water options and reduce the level of drinking arsenic contaminated water to less than 50 % in the more than 80 contaminated 3 Unions, (ii) increase awareness about arsenic mitigation as well as water safety among about 70% household adults and schools in the three Unions, (iii) enhance community, local government institution and women's participation in management of water supply and its related hygiene based on established capable women groups in villages; (iv) establish WGs, enhance WG knowledge, capacity, confidence and interests in service delivery for operation and maintenance (O&M) of alternative technologies selected by the community for safe drinking water while demonstrating their feasibility. The capacity and interests of WGs will be developed based on integrated training on safe water, O & M of options, kitchen gardening, poultry farming and appropriate processing of local foods to value added products. (v) enhance ownership of options installed by communities through the establishment of water option committees.

III. Management

6. The project was started in 3 Unions of Nagarkanda upazila in Faridpur district, where there was high arsenic contamination in 2003, as planned in the approved proposal. Accordingly local project preparation, sensitization and contacts, baseline survey, and launching were done in collaboration and consultation with the specified stakeholders, such as, people, Thana Administration, Local government representatives, DPHE, local NGOs, Schools and others. However, soon it was realized that the SIWRPMP has had revised its project areas and excluded Nagarkanda Upazila. Since the project

proposal was prepared considering the scopes of SIWRPMP and there are important merits in studying the sustainability aspects of this project with SIWRPMP, we discussed our thoughts with Kenichi Yokoyama, Senior Water Resources Specialist, SARD, Agriculture, Environment and Natural Resources Division and Ellen Pascua, ADB. We met with the Project Director of SIWRPMP and members of Expert Consultant Team after approval and support from the ADB. They were interested in our proposal but requested us to wait for Team Leader of the consultant expert Team (Mr. RR); who was out of the country on annual leave. Subsequently we met with the full Team and finalized the details of the collaborative activities. During those meetings we also tested arsenic in drinking water samples from potential study areas and shared the results with them in order to select the study areas. . In the end of September 2009 we more or less finalized the study areas and activity plans in SIWRPMP (Kalia), keeping the main activities, expected outcomes and budget the same as in TOR of this demonstration project.

7. Currently the project activities are being conducted simultaneously in selected areas in, both, Nagarkanda Upazilla (outside SIWRPMP) and Chechuri Beel (Kalia, inside SIWRPMP).. The EPRC and SIWRPMP teams will meet regularly and as required to plan as well as share information on the activities to be carried out in Kalia. EPRC will carry out the activities in Nagarkanda and Kalia following the same objectives, strategies and targets as approved in the proposal.

8. The main revisions to be incorporated under the existing situations (provided there is no objection from ADB), may be summarized and compared as follows (Table 1):

Table 1: A summary of the proposed revisions

Number	Issues	In the proposal	Current status
1	Study area	3 Unions of Nagarkanda upazila in Faridpur district	Working in selected villages/areas in: (i) Nagarkanda Upazilla, including Paurshava and rural kaichal Unions and, (ii) SIWRPMP (Kalia Upazilla), including selected Babra Hachla and Perulia Unions.
2	No arsenic water quality tests done and/or information could be located after 2003. Many tubewells installed after 2003. In order to select the priority need areas, arsenic water quality tests and data are required.	2. Not proposed. Water quality tests proposed only for the technologies to be installed under the project	2. Samples of the water drunk by the poorest and most water constraint populations observed during the baseline survey will be tested for arsenic in both the areas
3	Baseline survey, creation of awareness, installation of water options, school campaign and all the proposed activities	Only in Nagarkanda	In the study areas under both Nagarkanda and SIWRPMP (Kalia)
4	Creating awareness and access	Awareness among all the village	Creating awareness among all the selected village populations and

	to safe drinking water technologies	populations and access to safe drinking water technology among approximately 2000 populations in Nagarkanda	access to safe drinking water technology among approximately 2000 populations, in total, in the two study Upazillas
5	Reference to the women involvement	As Women Groups (WG)	As Women for Environment (WE) groups
6	Number of women groups and installation. It will be reduced for the following reasons: (i) preliminary results show that within the available few months WE groups (particularly for operating and maintaining drinking water technologies) can be established in clusters where the project will install water technologies (ii) the communities are only interested in deep tubewells and pipe water systems. Both the technologies are more expensive than the other alternative technologies, (iii) the water quality problems include high iron and salinity concentrations in both areas; which was not known during the project development. This situation has further complicated the installation of deep tubewells and, (iii) increased activity load	15 number of WE groups proposed.	But the project cannot install so many community chosen options based on the available fund. Ten number of WE groups as well as 10 number of water technologies/water safety installations will be done in most needy and crowded poorest areas. Out of the 10 installation; 8 sites have been preliminarily selected (4 in Nagarkanda and 4 in Kalia) in consultation with the communities and WE groups. The remaining 2 will be selected soon. .
7.	Training of the WE members	275 members over 6 days under the 15 WE groups. On average 18-19 per group	On average 19 women per group will be trained, in total 190 women members. The number of days in training will be reduced to 4 days as the women (mostly housewives) expressed difficulties in attending training over several consecutive. So there will be two rounds of training; each for 2 days.
8.	Water Options	To be selected from the GOB approved alternatives and arsenic removal options as chosen by the informed communities	High demand for deep tubewells, individual household rain-water harvesters and two pipe-water systems. But considering the Project target, unit costs and available fund with the community choices; one pipe water system, few deep tubewells, 3 platforms and 2 community rain water harvesters may be installed. .
9.	The institutional structure and procedures of WE group	Mainly to be finalized	We will incorporate guidelines after the national water policies and

consultation with the women

SIWRPMP, consultations with the members of WE and due considerations to the research on building effective capacities of the WEs.

IV. The Strategic Model

The strategic model towards sustainable safe drinking water as incorporated in SIWRPMP (Kalia) is presented in the following schematic drawing (figure 1).

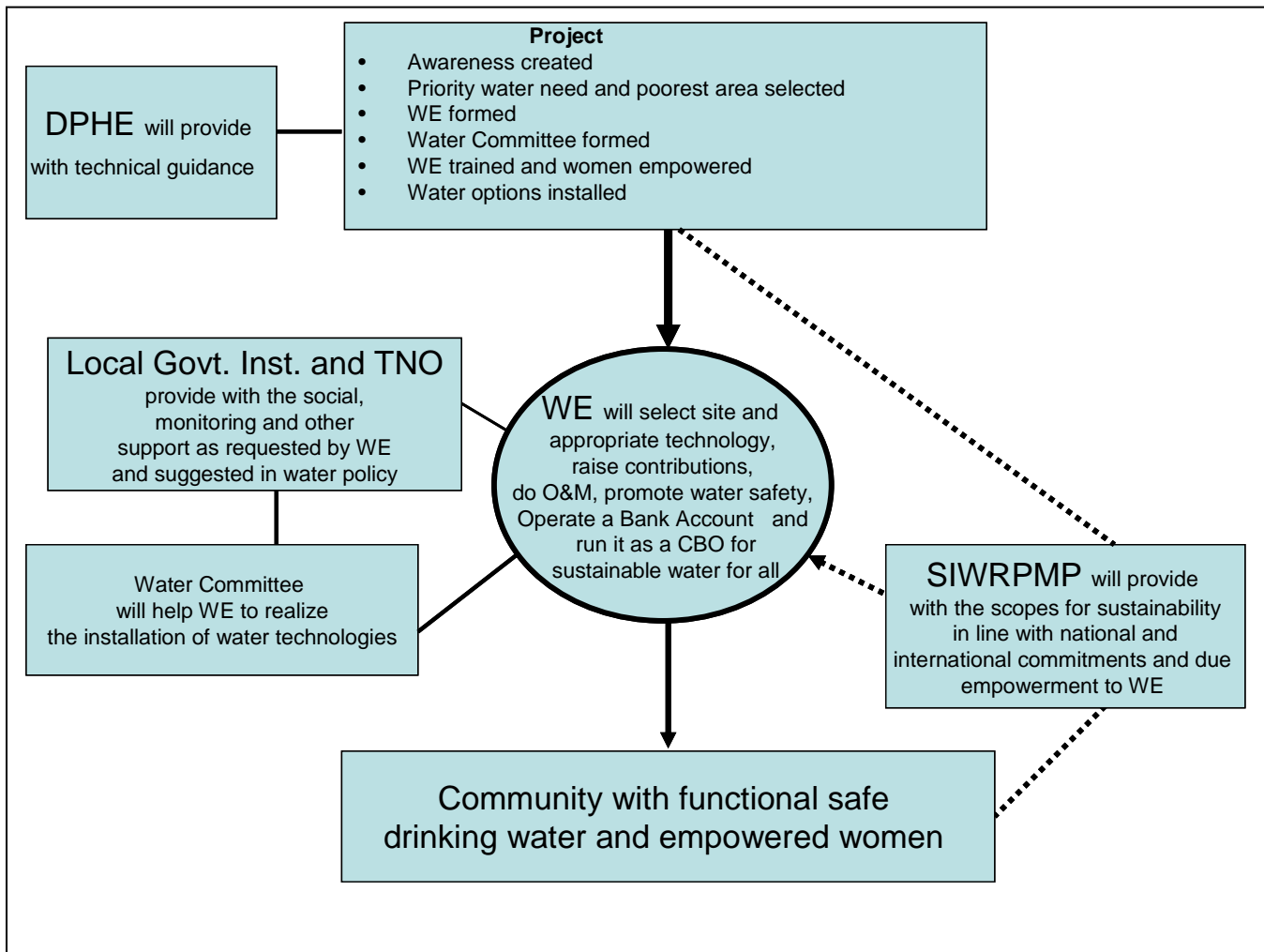


Figure 1: A schematic drawing of the proposed institutional model (WE) and its related activities

The strategic model in Nagarkanda will be same, except the parts connected to SIWRPMP will be absent. Attempts will be made to connect to other long-term activities, if available and feasible.

V. Detailed Activity Schedule

The main activities have been/will be as follows:

Time Period	Actions
3 rd -4 th week of May'09 1 st Week of June'09	Completing hiring process & Setup of Project Office. Signing of contracts Meeting & discuss with Department of Public health Engineering Superintending Engineer, Ground Water Circle, Executive Engineer, Research & Development division and Bangladesh Water Development Board SIWRPMP Project Director.
1 st Week of June'09	Met and formal letter given to District Commissioner, Sub-district head informed about the project.
2 nd Week of June'09	Secondary data collection of the project areas and discussion with local stakeholders & local Govt. members
2 nd Week of June'09	Selection & finalization the project working Union & village
3 rd - 4 th Week of June'09	Baseline survey format Dev. & finalization, conduct baseline survey in 450 hhs in Nagarkanda,
1 st Week of July'09	Conducting 15 focus group discussion
3 rd - 4 th Week of July'09	Baseline Survey data entry & Analysis
3 rd Week of July'09	Organize & conduct inception workshop
4 th Week of July'09	Hydrological & Soil Condition data collection by DPHE
1 st Week of Aug'-09 to 4 th week of Sept' 09	Awareness material poster (5000 copies) and flash card (100 sets) Dev. & field testing & final production for community.
3 rd Week of Aug'-09 to 4 th week of Sept' 09	Training Material Dev. & field testing & finalize
3 rd week of Sept. to 4 th week of Oct'09	WE Formation (Total 10 groups in two areas)
2 nd Week of Sept to 4 th week of Dec 09	Community Awareness Creation by EPRC (through participatory court yard & village meetings and tea stall consultation)
2 nd & 3 rd Week of Aug'-09 and then as required	Meeting and discussion (4 times) with ADB SIWRPMP Project consultant team for link-up the women group with their project as per our project objective.
1 st week of Sept' 09	Selection & finalization another project working Union & village to consultation with ADB SIWRPMP Project consultant team.
2 nd & 3 rd Week of Sept' 09	conduct baseline survey in 60 hhs in Kalia,
4 th week of Sept and 1 st week of Oct' 09	Randomly testing arsenic contents of used drinking water tubewells in 100 water options in both areas
2 nd week of Oct'09	Project inception report with detailed work and financing plan, project management and monitoring system
1 st week of Sep 09 to 4 th week of Nov '09	Starting consultations on various water options and possible Site Selection of Safe Water Options among potential WE groups and communities
3 rd & 4 th week of Oct '09	Develop and Printing of option maintenance Manual with WSP (275 copies)
4 th week of Oct '09	Project Mid-term Report: Financial and Technical
1 st week of Nov '09	Purchase & printing WG training logistic (Certificate, bag ,umbrella etc)
4 th of Oct' 09 to 3 rd week of November (First round)	WEs Training on Environmental Health, Water Safety Plan & income generation (2 days long)
2 nd week of Nov '09	School Campaign (2 areas 900 students)
3 rd week of Nov '09	Mass Meeting (2 areas)
3 rd week of Nov '09 until the end of the project	Starting motivation about hygiene and O& M by WGs under EPRC guidance
1 st week of Oct'09 to 4 th week of Dec 09	Water Management Committee Formation
1 st week of October to 4 th	Cost Sharing Money Collection

week of Dec 09	
2 nd week of October 09 to 4 th week of Feb'2010	Finalization of sites, options and installation of Safe Water Options installation
1 st to 4 th week of Feb'2010	Water Quality Test in the installed Options
1 st week of Mar '2010	WEs Training on O & M training & tools Distribution.
1 st week of Mar '2010	Formal handover SWP to community
2 nd & 3 rd week of Jan '10	Follow-up Survey (150hhs)
4 th week of Jan '10	Follow-up Focus Group (5 nos)
3 rd week of Jan'10 to 4 th week of Feb '10	Data entry & analysis
4 th week of February and 1 st week of March '10 (second round)	Refresher WEs Training on capacity buildup & income generation (2 days long)
2 nd week of March '10	Provide income generation equipments and revolving fund based in best performance
2 nd week of April'10	Link -up the WEs with SIWRPMP Project Water Management Committee
3 rd & 4 th week of April '10	Monitoring of the Options & Water Safety Plans
3 rd & 4 th week of April '10	Monitoring Water Quality (Test)
1 st & 2 nd week of May '10	Final Survey (450hhs)
2 nd week of May '10	Final Focus Group (10 nos)
3 rd & 4 th week of May '10	Data entry & analysis
3 rd week of June'2010	Project Completion Report: Financial and Technical,

VI. Detailed Budget

The estimated budgets against the detailed out activities are presented below.

	Inputs/Expenditure Category	Unit	Quantity	Unit Cost (US\$)	Total cost (US\$)
1.	<i>Equipment and supplies</i>			<i>Sub-Total:</i>	<i>5,820</i>
a.	Poster for awareness in community	Copies	5000	0.25	1250
b.	Flash card for awareness in community	Sets	100	5.0	500
c.	Printing of water option maintenance manual with WSP	Copies	200	5.0	1000
d.	Development & production of training materials & tools	copies	200	3	600
e.	Renting of 2 computers	month	4	100	400
f.	Renting of 2 cabinet for store materials & papers	month	8	15	120
g.	Renting office space in 2 project areas	Months	12	100	1200
h.	Stationery (papers, Pinter cartridge, toner, etc)	forfeit	1	750	750
2	<i>Conferences, workshops, survey, campaigns</i>			<i>Sub-Total:</i>	<i>11,738</i>
a.	Situation analysis survey (baseline 550 hhs , follow-up 150hhs & final 450 hhs)	households (hhs)	1150	1.5	1725
b.	School campaign	people	900	0.5	450
c.	Trainee fellowship participants transportation allowance (4 days)	People	200	8	1600
d.	Renting of venue for WGs training (4 days & 3 areas)	days	12	30	360

e.	Refreshment for trainees (4 days)	People	200	8	1600
f.	Training logistics (Certificate, bags)	people	200	4	800
g.	Renting of venue for inauguration workshop	days	1	60	60
h.	Food & Refreshment for inauguration workshop	people	30	8	240
i.	Inauguration Workshop logistics (Multimedia, Microphone, folder etc.)	People	30	4	120
j.	Rental logistic for Mass meeting	People	1000	0.5	500
k.	Focus group meeting	number	25	7.5	188
l.	Research Assistant (2 Person 2 project areas) - Salary	month	20	125	2,500
m.	Data collector & Motivator (2 Person) - Salary	month	16	100	1600
3.	Specialist Services			Sub-Total:	32,415
a.	Hydrological data collection by DPHE for installation water options (3 areas)	1 time	3	100	300
b.	Soil condition test & bore log test by DPHE for installation water options	1 time	9	50	450
c.	Installation of arsenic technology options				
	- Village pipe water Supply System	Number	1	12370	12370
	- Deep hand Tube-well		5	900	4500
	- Community Rain water Harvester		2	975	1950
	- Provide platform in tested Arsenic safe STW		2	75	150
d.	Randomly arsenic water quality tests in existing STW	number	75	4.0	300
e.	Water quality testing in installed water option	times	20	25	500
f.	Provide option O& M tools for options	Sets	10	25	250
h.	Water Specialist				
	- Salary	months	1.5	2,000	3,000
	- Per diem	days	8	40	320
i.	Project Coordinator				
	- Salary	months	12	275	3,300
	- Per diem	days	30	20	600
j.	Programmer				
	- Salary	months	1	350	350
k.	Data management Officer				
	- Salary	months	4	130	520
l.	Income generation training equipments				
	- food processing	Pieces	5	40	200
	- Plantation & seedling demonstration		50	2.0	100
	- Sewing Machine		5	60	300
m.	Fuel (120 liter per trip in two project areas)	Liters	480	1.0	480
n.	Renting of Cars	weeks	3	185	555
o.	Local field transport	month	12	160	1920
4	Contingency	Lump sum			0
Total PDA Grant Financed (1+2+3 +4)					49,973